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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In the Matter of )  
 )  
Rulemaking to Amend Parts 1, 2, 21 and 25 )  
of the Commission's Rules to Redesignate )  
the 27.5-29.5 GHz Frequency Band, to )  
Reallocate the 29.5-30.0 GHz Frequency Band, )  
and to Establish Rules and Policies for Local )  
Multipoint Distribution Service and for )  
Fixed Satellite Services )  
 )  
Fourth Notice of Proposed Rulemaking )

CC Docket No. 92-297

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

REPLY COMMENTS OF  
TEXAS INSTRUMENTS, INC.

Texas Instruments, Inc. ("TI"), by its attorneys, hereby submits its reply comments in the above-captioned Fourth Notice of Proposed Rulemaking ("*Fourth Notice*").<sup>1</sup>

I. INTRODUCTION AND SUMMARY

TI urges the Commission to heed the comments of numerous parties in this proceeding that have expressed the importance of moving forward with auctions and implementation of Local Multipoint Distribution Service ("LMDS") as rapidly as possible. In this regard, TI is heartened by the fact that the Commission has issued an auction schedule

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<sup>1</sup> Rulemaking to Amend Parts 1, 2, 21 and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, and to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services (First Report and Order and Fourth Notice of Proposed Rulemaking), CC Docket No. 92-267, FCC 96-311 (rel. July 22, 1996).

which proposes LMDS auctions this year.<sup>2</sup> TI believes that it is imperative to conduct auctions promptly in order to allow this long-awaited procompetitive service to be made available to the public.

TI also appreciates the Commission's interest in allocating additional spectrum for LMDS. Additional spectrum is needed to permit LMDS to reach its full potential as an alternative interactive service for video, data, and voice communications. TI reiterates its belief, however, that if the Commission is unable to promptly resolve any issues that arise with respect to the *Fourth Notice*, then the Commission should proceed to auction the one gigahertz of spectrum already allocated to LMDS in order to ensure that the auctions take place by the end of the year.

**II. AS THE MAJORITY OF POTENTIAL USERS AND MANUFACTURERS STATES, THE COMMISSION SHOULD MOVE FORWARD WITH THE IMMEDIATE AUCTION AND IMPLEMENTATION OF LMDS.**

There currently exists a substantial window of opportunity for LMDS operators to bring a wealth of new services to American homes, schools, hospitals and businesses. However, as most potential users and manufacturers recognize, that window will close unless the Commission acts in the very near term to allow the auction and implementation of LMDS.<sup>3</sup> As CellularVision noted in its comments, "LMDS auctions must commence before

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<sup>2</sup> See FCC Auction Schedule, Released 8/7/96.

<sup>3</sup> See Comments of CellularVision USA Inc. at 6; Comments of GE American Communications, Inc. at 1; Joint Comments of Bell Atlantic Corporation and SBC Communications Inc. at 16 ("Bell Atlantic/SBC"); Comments of MCI Telecommunications, Inc. at 2; Comments of Endgate Corporation at 1; Comments of RioVision, Inc. at 2; Comments of ComTech Associates, Inc. at 2.

the end of 1996 if this new technology is to compete effectively in the changing communications marketplace being shaped" by the new Telecommunications Act.<sup>4</sup>

As many of the commentators noted, any further postponement in the auction and licensing of LMDS will have a substantially negative impact on the industry and on the public interest. Quite simply, delay means foregoing the numerous service offerings that will be available through LMDS.<sup>5</sup> Delay also means foregoing significant, deficit-reducing auction revenues, and the substantial economic investment that will be made in LMDS -- investment that will result directly in U.S. job creation in high-technology manufacturing and services.<sup>6</sup> The FCC simply should not let this substantial opportunity slip away through indecision.

Ironically, while the technology has languished in the U.S., other countries are already implementing LMDS.<sup>7</sup> For example, Industry Canada, the Canadian Ministry

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<sup>4</sup> See Comments of CellularVision at 6.

<sup>5</sup> As the Commission has acknowledged, LMDS will offer new competition to traditional cable and telephone carriers, providing consumers with such services as two-way video on demand, teleconferencing, long distance learning, telemedicine, telecommuting, data services and global networks. See *Fourth Notice* at ¶¶ 14, 15. The record in this proceeding also shows that, given the flexibility of LMDS technology and its relatively low cost, the new technology may be of particular importance of bringing high technology services to rural America. See Comments of Ad Hoc Rural Telecommunications Group at 2 ("Ad Hoc RTG"); Comments of Farmer's Telephone Cooperative, Inc. at 3; Comments of National Telephone Cooperative Association at 2 ("NTCA").

<sup>6</sup> Delayed implementation of the band plan adopted in the *First Report and Order* could also interfere with the implementation of new satellite services due to the resulting continued uncertainty with respect to spectrum use in the 28 GHz band. See Comments of Lockheed Martin Corporation at 4.

<sup>7</sup> See Comments of CellularVision at 5.

responsible for telecommunications regulation, has accepted 13 applications to provide LMCS services<sup>8</sup> and is expected to issue two licenses in each of 66 communities *this fall*.<sup>9</sup> This is the first phase of the planned use of three gigahertz of spectrum for LMDS. Recent press reports state that Canadian officials are hoping that Canadian LMCS equipment manufacturers will be able to capitalize on Canada's headstart (and the U.S.'s slow start) in deploying LMCS systems in the international market.<sup>10</sup> This headstart obviously would come at the expense of the U.S. high technology manufacturing industry -- even though LMDS technology was first developed in this country.

In light of these factors, TI (along with numerous other parties in this proceeding) urges the Commission to act quickly to auction and license LMDS and believes that if the Commission cannot promptly resolve any pending issues in the *Fourth Notice*, it should proceed without delay to auction and license the one gigahertz of spectrum already allocated to LMDS.<sup>11</sup>

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<sup>8</sup> In Canada, LMDS is called Local Multipoint Communications Systems ("LMCS").

<sup>9</sup> See Johanna Powell, *Special Report: Wireless Communications, Edging into the Fast Lane*, The Financial Post, Aug. 10, 1996.

<sup>10</sup> See *id.* For example, Winnipeg-based Broadband Network Inc. has installed LMCS technology in Kobe, Japan. *Id.*

<sup>11</sup> See Comments of CellularVision at 6; Comments of RioVision at 2; Comments of CellularVision Technology and Telecommunications, L.P. at 6 ("CT&T").

### **III. THE FCC SHOULD ADOPT ITS PROPOSAL TO ALLOCATE THE 31.0 - 31.3 GHZ BAND TO LMDS ON A PRIMARY PROTECTED BASIS.**

In recognition of the substantial need for additional LMDS spectrum, the overwhelming majority of those parties commenting on this aspect of the *Fourth Notice* support the proposed reallocation of the 31 GHz band for LMDS.<sup>12</sup> TI reiterates its agreement that the Commission should move expeditiously to allocate the 31 GHz band for LMDS on a primary protected basis.<sup>13</sup> As the commentors in this proceeding confirm, the 31 GHz band is underutilized,<sup>14</sup> and the band's limited number of current licensees is operating on a secondary, unprotected basis.<sup>15</sup>

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<sup>12</sup> See Comments of CellularVision at 5; Comments of GE American at 2; Comments of Lockheed Martin at 3; Comments of Wireless Cable Association International, Inc. at 3; Ad Hoc RTG at 7; Joint Comments of America's Public Television Stations and Public Broadcasting Service at 3; Comments of Puerto Rico Telephone Company at 4; Comments of Hewlett-Packard Company at 2-3; CT&T at 4; RioVision at 2; ComTech at 5; Endgate at 1; Comments of Hughes Communications Galaxy, Inc. at 2.

<sup>13</sup> A number of parties have also indicated their support for the reallocation of spectrum below 27.5 GHz for LMDS, and TI reiterates its support for this allocation, as well as its willingness to help the Commission in this venture. See CellularVision at 6; WebCel at 26; ComTech at 2; Rio Vision at 2; *see also* Sierra Digital at 10-11.

<sup>14</sup> For example, Sierra Digital confirms that there are relatively few secondary licensees in the 31 GHz band: about 30 counties, cities and other local governments (out of the more than 39,000 of such governmental units in the U.S. See Sierra Digital at 4; *Statistical Abstract of the United States 1995*, U.S. Dept. of Commerce, 297 (Sept. 1995). Even of the estimated 30 affected licensees, only five have participated in this rulemaking, and only one of them has directly opposed the proposed reallocation.

<sup>15</sup> While a few commentors oppose reallocation of the band for LMDS use, other city interests variously ask for continued access to the spectrum, *see* Comments of City of San Diego at 2, an alternative method of distribution, *see* Comments of ComStat Communications at 3, or argue for a "mutually acceptable compromise." Comments of Mobile Source Air Pollution Reduction Review Committee of the South Coast Air District, State of California at third unnumbered page.

A. The Current Users of the 31 GHz Band Knowingly Accepted Secondary Status and Cannot Now Demand Protected Status.

Arguments that the current users of the 31 GHz band deserve some form of special protected status are unpersuasive and directly contrary to long-standing FCC policies and rules. The Commission's rules are explicit that licensees in a secondary service "[c]annot claim protection from" and "[s]hall not cause harmful interference" to primary users of a frequency.<sup>16</sup> The priority given to primary users applies both to currently existing primary users and future primary users "to which frequencies may be assigned at a later date."<sup>17</sup> Moreover, the agency has consistently held that secondary users have absolutely no legal right to protection.<sup>18</sup> They take their licenses subject to any interference caused by existing or future primary users.

Their status as secondary users can hardly come as a surprise to the current users of the 31 GHz band. To the contrary, the current users -- described by a leading manufacturer of 31 GHz equipment as "sophisticated in communications technology and FCC

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<sup>16</sup> 47 C.F.R. §§ 2.104(d)(4) & 2.105(c).

<sup>17</sup> 47 C.F.R. § 2.104(d)(4)(i).

<sup>18</sup> See, e.g., *Motorola Satellite Communications, Inc. for Authority to Construct, Launch, and Operate a Low Earth Orbit Satellite System in the 1616-1626.5 MHz Band*, 10 FCC Rcd 2268 (1995) (noting that the secondary status of Motorola's downlink authorization prohibits its from interfering with primary users); *Monetary Forfeiture Against Texidor Security Equipment, Inc.*, 4 FCC Rcd 8694 (1989) (upholding forfeiture when secondary business radio user caused interference to primary user); *Communications Satellite Corp.*, 2 FCC Rcd 390 (1987) (disregarding claims of potential impairment toward secondary MSS user that would be caused by a new authorization for INMARSAT service in band in which such service has primary status ); see also 47 C.F.R. §§ 2.104(d)(4) & 2.105(c).

regulation"<sup>19</sup> -- knowingly applied for and accepted licenses that, under the express terms of the Commission's rules, are subject to interference from existing or future primary licensees in the band.<sup>20</sup> It seems obvious from their comments in this proceeding that they did so in order to facilitate licensing and avoid frequency coordination.<sup>21</sup> However, these facts simply cannot now be used as a reason why they should be awarded protected status after the fact.

Likewise, the fact that current licensees in the band have been able to operate temporarily with "effective protection" among themselves begs the question as to whether secondary users must as a matter of law accept interference from primary users. It is simply irrelevant that the current users of the 31 GHz band have been able to avoid interference on their own. To decide otherwise, is to confer a protected status totally unwarranted by Commission precedent and their own authorizations.

B. Allocating the 31 GHz Band to LMDS Does Not Require an Environmental Impact Statement.

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One 31 GHz equipment manufacturer incorrectly argues that reallocation of the 31 GHz band for LMDS would necessitate an environmental impact analysis under the National Environmental Protection Act (NEPA).<sup>22</sup> As TI understands the argument, since current 31 GHz devices may have a positive effect on gas consumption, the Commission may not

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<sup>19</sup> See Comments of Sierra Digital at 11.

<sup>20</sup> See 47 C.F.R. §§ 2.104(d)(4) & 2.105(c).

<sup>21</sup> See Comments of Sierra Digital at 6-7.

<sup>22</sup> See Comments of Sunnyvale GDI at 5.

reallocate the spectrum to include other services without conducting an environmental impact analysis.

Initially, the kind of impact suggested by Sunnyvale (even if proved) is not the kind of impact for which the Commission has traditionally developed environmental impact statements. Indeed, the Commission has indicated that the preparation of such a statement would be appropriate in "proceedings which involve the availability of frequencies for use in a way which can significantly affect the *physical* environment".<sup>23</sup> Typically, this involves tower construction or communications facilities which are directly "designed to warn of power outages, of an oil spillage, or of forest fires".<sup>24</sup>

However, even if this were the kind of impact envisioned by the Commission's implementation of NEPA, it is clear that the alleged environmental "impact" is simply a consequence of current users' secondary status -- an "impact" which already existed and was fully known when the spectrum was allocated for secondary use and when the current services were licensed. Thus, the "impact" is nothing new. The current users of the 31 GHz band have never had unfettered use of the band and, in fact, have always been subject to interference caused by any existing or future primary user.

Moreover, the potential environmental impact in this case is wholly speculative. Sunnyvale has provided absolutely no facts to support its apparent belief that the reallocation proposed by the Commission will have an adverse environmental impact. In fact, it is not

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<sup>23</sup> *Implementation of the National Environmental Policy Act of 1969*, 49 F.C.C.2d 1313, 1318 (1974).

<sup>24</sup> *Id.* at 187.



apparent that the proposed reallocation would have *any* environmental impact since it would not necessarily mean the end of the secondary licensees' services. The current users could continue to use the frequency pursuant to their existing secondary status, or, as the Commission has previously noted, avail themselves of other alternatives.<sup>25</sup> For example, current 31 GHz users could be relocated to other spectrum bands.<sup>26</sup> Alternatively, current 31 GHz users could continue to use the spectrum band on a secondary basis by engineering around LMDS. In this regard, the City of Topeka indicated its belief that current secondary users could be accommodated with LMDS systems "without creating interference problems that can't be resolved" or alternatively that the "individual radios we operate can be relocated, if necessary, to eliminate operating incompatibilities."<sup>27</sup>

C. Reallocation of the Current Users of the 31 GHz Band Does Not Constitute a Modification of Their Existing Licenses and Does Not Merit Compensation.

Sunnyvale GDI incorrectly suggests that the proposed reallocation would constitute a modification of the incumbent 31 GHz users' licenses.<sup>28</sup> Sunnyvale GDI cites absolutely no support for this proposition, and none exists. As indicated above, the current licensees in 31

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<sup>25</sup> See, e.g., *Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies*, 7 FCC Rcd 6886 (1993).

<sup>26</sup> While Sierra Digital states that 23 GHz cannot accommodate 31 GHz users, see Comments of Sierra Digital at 12-13, the City of Topeka suggests that such a relocation is primarily a financial issue for current secondary users of 31 GHz systems, see Comments of City of Topeka at fourth unnumbered page.

<sup>27</sup> See Comments of Topeka at fourth unnumbered page.

<sup>28</sup> See Comments of Sunnyvale GDI at 8.

GHz are *secondary* users, and a reallocation of 31 GHz to include other, primary users simply would not lessen the rights which they currently have.

For similar reasons, the current users of 31 GHz cannot claim a right to compensation if they are relocated. As secondary users, they are bound to bear the impact of interference from primary users.<sup>29</sup> Indeed, those parties that have suggested that incumbent licensees should be compensated have cited absolutely no precedent in which the Commission has required secondary users to be compensated, and no basis exists to require compensation.<sup>30</sup>

D. The Commission Should Cease to License New Users in the 31 GHz Band During the Pendency of This Proceeding And Should Not Grandfather Existing Users.

As an interim measure, the Commission should impose an application freeze at 31 GHz. As other parties have noted, continuing to accept, process and grant 31 GHz applications will only complicate the eventual accommodation or relocation of secondary users.<sup>31</sup> For similar reasons, the Commission should not "grandfather" existing 31 GHz

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<sup>29</sup> See Comments of Sierra Digital at 13-14; Comments of City of Topeka at fourth unnumbered page.

<sup>30</sup> In contrast, the Commission allowed compensation for the reallocation of microwave licensees in the 2 GHz band because the licensees held primary protected status. See *Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies*, 7 FCC Rcd 6886 (1993); see also Comments of ComTech at 6-7.

<sup>31</sup> See, e.g., Comments of RioVision at 2; Comments of Hewlett-Packard at 4. While Sierra Digital argues that a freeze is unnecessary, it rests this argument on a contention that licensees in the 31 GHz band are sufficiently sophisticated in FCC regulatory matters to, in essence, "assume the risk" of holding unprotected user status. See Comments of Sierra Digital at 11-12. This argument, however, undercuts Sierra Digital's contention that current users in the 31 GHz band somehow deserve retroactive interference protection for their current licenses.

systems,<sup>32</sup> since such action would provide current secondary users with *de facto* primary status.

#### IV. CONCLUSION

The Commission has released a proposed auction schedule which contemplates the auctioning of LMDS spectrum before the close of the current year. It is critically important for the Commission to maintain this schedule. The ability of LMDS operators to compete against other telecommunications providers may soon be extinguished because of the Commission's inaction. Indeed, the 1996 Act's rapid implementation schedule is already permitting existing telecommunications companies to begin offering the same types of new interactive telecommunications services that LMDS proponents have been seeking to offer for the past four years.

The Commission should also move forward without delay in allocating additional spectrum for LMDS. Additional spectrum is needed to permit LMDS to reach its full potential as a full-service two-way communications service that can provide video, data and traditional telephone-type services to customers at competitively low prices. TI reiterates its belief, however, that if the Commission is unable to promptly resolve any issues that arise out of the *Fourth Notice* with respect to allocating additional spectrum for LMDS, the Commission should immediately conduct auctions for the one gigahertz of spectrum already

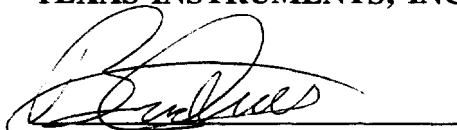
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<sup>32</sup> See comments of City of Topeka at fifth unnumbered page.

allocated to LMDS. Only in this way can the Commission ensure the deployment of LMDS, and the attendant provision of new competitive services for consumers.

Respectfully submitted,

**TEXAS INSTRUMENTS, INC.**

A handwritten signature in black ink, appearing to read "Robert L. Pettit", is written over a horizontal line.

Robert L. Pettit

Michael K. Baker

Bruce A. Olcott

of

Wiley, Rein & Fielding

1776 K Street N.W.

Washington, D.C. 20006

(202) 429-7000

Its Attorneys

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